B V H Consulting Engineers

Survey and Engineering Project Consultants

Ref no: BVH/ BBMP/ /2019-20 Date: / /

To,
THE EXECUTIVE ENGINEER
Project Division,

BBMP.Yelahanka Zone

Bangalore

Respected Sir,

Sub: - Submission of PMC letter for 1st and part bill of the work Package1 Improvements to Roads and Drains, Providing Amenities, Construction of RO Water Plant, Bengaluru One Center, Providing Sodium Vapour Lights, Sign Boards in Ward no.5 & 6 Byatarayanapura Division as per annexure Go No UDD 217 SFC 2016 Dated 28.5.2016 Works Sl No for Ward No. 5 1 To 6 & Ward No. 6 7 To 11.

Agency Name: K. R. Santhoshkumar

With reference to the above, I write to submit the letter for the work cited under subject reference. The work is executed satisfactorily as per norms and supervised by our technical staff, in presence and guidance of departmental engineer in charge and the work was found completed satisfactorily up to 2nd and Final Bill amounting Rs.23,18,194.81

Thanking You,

AE ward No 5

Your's faithfully

B.V.H Consulting Engineers
(Proprietor)

BVH CONSULTING ENGINEERS Bangalore

#42/1, 6th Main Road, Jnanajyothi Nagara, Malathalli, Bangalore – 560 056.Tel: 080-23241948, Fax: 080 - 23240685, Cell : 9964339888 E-mail : mbnk2278@yahoo.com

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BITUMEN EXTRACTION TEST [FIELD TEST]

NAME OF WORK : Package1 Improvements to Roads and Drains, Providing Amenities, Construction of RO Water Plant, Bengaluru One Center, Providing Sodium Vapour Lights, Sign Boards in Ward no.5 & 6 Byatarayanapura Division as per annexure Go No UDD 217 SFC 2016 Dated 28.5.2016 Works Sl No for Ward No. 5 1 To 6 & Ward No. 6 7 To 11.

Sub - Name of Work : Improvements to Balance Roads and Drains at Bhuvaneshwarinagara, Maruthi Layout and Surrounding Areas in Ward No 06 - Thanisandra, Byatarayanapura Sub Division.

Client : Executive Engineer, Byataranapura Division, NO.2152/20, Defence colony, Sahakara Nagara, Bangalore-92

Name of the Agency: K. R. Santoshkumar

Reference: Agreement NO.BBMP/EE/BTP/AG/005/16/000052/16-17 Dated : 16/01/2018

Date of Testing: 28-02-2019

Tests on Bituminous Concrete				
Test No 1			**Test Time :**	**10.17 AM**
Sample No	**Initial Weight of the Mix [w1], in g**	**Weight of mix after extraction of Bitumen [w2], in g**	**Difference in weight, w=[w1-w2], in g**	**Percentage of Bitumen Extracted = [(w /w1)*100]-100, in %**
1	500	472	28	5.6
2	500	472	28	5.6
Test No 2			**Test Time :**	**12.25 PM**
Sample No	**Initial Weight of the Mix [w1], in g**	**Weight of mix after extraction of Bitumen [w2], in g**	**Difference in weight, w=[w1-w2], in g**	**Percentage of Bitumen Extracted = [(w /w1)*100]-100, in %**
1	500	472	28	5.6
2	500	472	28	5.6

Note :

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be within 30 days from the date of testing.

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BITUMEN EXTRACTION TEST [FIELD TEST]

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Sub - Name of Work : Improvements to Balance Roads and Drains at Bhuvaneshwarinagara, Maruthi Layout and Surrounding Areas in Ward No 06 - Thanisandra, Byatarayanapura Sub Division.

Client : **Executive Engineer, Byataranapura Division, NO.2152/20, Defence colony, Sahakara Nagara, Bangalore-92**

Name of the Agency : K. R. Santoshkumar

Reference: Agreement NO.BBMP/EE/BTP/AG/005/16/000052/16-17 Dated : 16/01/2018

Date of Testing: 28-02-2019

Tests on Bituminous Concrete				
Test No 1			**Test Time :**	**02.10 PM**
Sample No	**Initial Weight of the Mix [w1], in g**	**Weight of mix after extraction of Bitumen [w2], in g**	**Difference in weight, w=[w1-w2], in g**	**Percentage of Bitumen Extracted = [(w /w1)*100]-100, in %**
1	500	472	28	5.6
2	500	472	28	5.6
Test No 2			**Test Time :**	**03.52 PM**
Sample No	**Initial Weight of the Mix [w1], in g**	**Weight of mix after extraction of Bitumen [w2], in g**	**Difference in weight, w=[w1-w2], in g**	**Percentage of Bitumen Extracted = [(w /w1)*100]-100, in %**
1	500	472	28	5.6
2	500	472	28	5.6

Note :

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TEST FOR TACK COAT

NAME OF WORK : Package1 Improvements to Roads and Drains, Providing Amenities, Construction of RO Water Plant, Bengaluru One Center, Providing Sodium Vapour Lights, Sign Boards in Ward no.5 & 6 Byatarayanapura Division as per annexure Go No UDD 217 SFC 2016 Dated 28.5.2016 Works Sl No for Ward No. 5 1 To 6 & Ward No. 6 7 To 11.

Sub - Name of Work : Improvements to Balance Roads and Drains at Bhuvaneshwarinagara, Maruthi Layout and Surrounding Areas in Ward No 06 - Thanisandra, Byatarayanapura Sub Division.

Client : Executive Engineer, Byataranapura Division, NO.2152/20, Defence colony, Sahakara Nagara, Bangalore-92

Name of the Agency : K. R. Santoshkumar

Reference: Agreement NO.BBMP/EE/BTP/AG/005/16/000052/16-17 Dated : 16/01/2018

Date of Testing: 28-02-2019

Tray no.	1	2
Weight of the tray(b)gms	1688	1688
Weight of the tray with prime(a)gms	1713.75	1712.92
Weight of prime(a-b)gms	25.75	24.92
Tray area (sqm)	300*300=0.09sqm	300*300=0.09sqm
Rate of spray (kg/sqm)	0.02575/0.09=0.28 kg/sqm	0.02492/0.09=0.27 kg/sqm
Avg. Rate of spray (kg/sqm)	0.275	

Specified rate as per Specification: 0.25 Kg/sqm

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BOQ Sl No	Description of the Item	Comments/Observation
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
2	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
3	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
4	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
5	KSRB 5.2-3 : Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
6	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
7	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
8	Providing and fixing RCC Precast cover slab of 250mm thick for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)	Work done up to the billed quantity and quantity is satisfactory
9	KSRRB M400-Construction of Median and island with Soil taken from Borrow Areas. KSRRB M400-19. Construction of Median and island with Soil taken from Borrow Areas. Construction of Median and island above road level with approved material deposited from borrowpits, spread, sloped and compacted as per Clause 400.7 complete as per specifications. MORTH Specification No. 407 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
10	KSRB 14.6-1: Providing and laying heavy duty cobble stones 60mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. Specification No. KBS. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
11	KSRRB M300-52.2. Scarifying Existing Bituminous surface to a depth of 50mm by Mechanical Means. Scarifying the existing bituminous road surface to a depth of 50mm and disposal of scarified material and complete as per specifications. MORTH Specification No. 305.4.3 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
12	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
13	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to **wet mix macadam** specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory
14	KSRRB M 500-6, Providing and applying **primer coat** with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory
15	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
16	KSRRB M500-7 : Providing and applying **tack coat** using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
17	KSRRB M500-16. Providing and laying **dense bituminous macadam** 50-75mm compacted thickness with 4.5% **VG-30 Bitumen** using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.162 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)	Work done up to the billed quantity and quantity is satisfactory
18	KSRRB M500-19. Providing and laying **bituminous concrete** 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)	Work done up to the billed quantity and quantity is satisfactory
19	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
20	Providing and making precast seating arrangement including excavation laying pcc M15, providing laying M20 concrete for pedestal and seating slab, fixing of seating slab including all necessary bolt and nuts etc, complete and as per the directions of Engineer in-Charge. (Data Rate) with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
21	Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Handpump, MWS of P.W.S.S by vertical electrical sounding by adopting Venner or Schlumberger's method, including reconnaissance survey of geological formation, Gerophysical investigation of existing Ground Wate in the vicinity, its quality f 1.0 meter in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instrument and accessories to work site., engaging techinical personal and labour required etc., as per Specification and direction of the engineer-in-charge of the work (P.48, I. 9.4) PRED.SR 2012-13	Work done up to the billed quantity and quantity is satisfactory
22	Sinking borewell of 165mm dia clear using superfast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with aminimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13 - 0 to 50m	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
23	Sinking borewell of 165mm dia clear using superfast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with aminimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13 - 50 to 100m	Work done up to the billed quantity and quantity is satisfactory
24	Sinking borewell of 165mm dia clear using superfast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with aminimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13 - 100 to 150m	Work done up to the billed quantity and quantity is satisfactory
25	Sinking borewell of 165mm dia clear using superfast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with aminimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13 - 150 to 200m	Work done up to the billed quantity and quantity is satisfactory
26	Sinking borewell of 165mm dia clear using superfast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with aminimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13 - 200 to 250m	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
27	Supply of ISI mark 175 mm nominal bore, Plain end steel casing pipe-grade of Steel Fee 410 of wall thickness 5.4 mm thick confirming to IS 4270:2001 and latest amendments, electric resistance welded steel tube material and confirming to IS 1387/1993 and manufactured by baseic open hearth electric or basic oxygen process in random length of 5 to 7mts both ends threaded confirming to IS 554/1985, one end fixied with socket confirming to IS 4270:2001 and the other end with screwed pipes ISI Marking weighing 25.10Kg/mtr (Inclusiveofalltaxesanddurties) Prices include Collar-medium duty P.iii,INo. 84 PRED SR 2012-13	Work done up to the billed quantity and quantity is satisfactory
28	Providing 250mm dia PVC Pipe 6kg/cm SE PRED Approved Rate	Work done up to the billed quantity and quantity is satisfactory
29	Providing and fixing160mm Borewell Cap P. iii, I No. 85	Work done up to the billed quantity and quantity is satisfactory
30	Supply and delivery at site brand New texmo/ innoval/ Lubi/ Sabar/ Atalanta/ Calamal/ make suitable for vertical installation in 150 mm dia borewell comprising of single stage or multi stage CF pump close coupled by means of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water (Wet type) squirrel cage submersible induction motor suitable for opertation of 3PH., 50Hz, 380/440 volts AC supply fitted with required accessories such as suction, casing suction strainers sand guard Non return value etc. complete.The pump and motor shall for an integral unit with all the required fittings 12.50 HP 25 stage. ATALANTA< SUGNA< CRI, KIRLOSKAR and other Equivalent Pumps PWD SR 2016-17 P. XXXXII Item No. 24 including of all taxes- 12.5 HP 25 Stage	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
31	Supplying of ISI marked galvanized mild steel tube (continously welded electric resistance welded (ERW) high frequency, induction welded (HFIW) Hot finished welded type of nominal bore given below screwed at both ends as per IS 554/1986 with latest amendments, pipes threaftes at one end and the other end protected as per specification in random lengths of 4 to 7mtrs Confirming to IS 1239 part I /1990 with amendament 1-5 and with all its latest amendements if any.The pipes supplied should be with BIS mark No 3/08-09 2406/15.10.2008	Work done up to the billed quantity and quantity is satisfactory
32	Heavy Duty Collar 50 mm dia	Work done up to the billed quantity and quantity is satisfactory
33	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper with low resitance conductor confirming to table 3 class 5 of IS:8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto1100Volts as per IS-694:1990 & confirming to GTP of GROUP-A. P. No. 12 / I No. 2. 10.4(1) 3C x 6 Sqm mm KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
34	Erection of pumpset including aligning and balancing with all necessary erection materials and labour including supply and erection of one pair supprting clamps, one borewell cap. Cable clips with bolts, nuts, valves guages etc., involoved in the job (Necessary GI pipe and specials with be supplied by the board at the site free of cost) (As per rate approved KUWS & DB for year 2008-09	Work done up to the billed quantity and quantity is satisfactory
35	Supplying and fixing 20"x20"x2.5" polished wood board made of not less than 15 mm thick plank on both sides with planks made out of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws etc., P No. 44 / I No. 6.6.6 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
36	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steelstrip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No.of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP- AP No. 55 / I No.7.4.44 core 16 Sq mm KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory

BOQ Sl No	Description of the Item	Comments/Observation
37	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / onwall / on pole as required. In existing trench / duct.P No. 61 / I No.7.8.16 Sq mm to16 Sq mm) KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
38	Digging of trench of 0.6 m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete. (As per Civil SR KSRB I-2,P-7) PNo.61/I.No.7.9.3 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
39	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25 mm on pole / wall / drain crossing with necessary clamping arrangements for UG cable of 1.1 KVP.No.62 / I No. 7.12.1 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
40	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen / insulating compound complete with terminals, clamps, bolts, nuts and washers etc., P.No.62 / I.No.7.13.2 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
41	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cut outs and other equipment's on the meter board using 40 mm dia 2.90 mm thick GI pipe 2.5mtr long buried in a pit...The pit should be filled with equal proportion of salt and charcoal 150 mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12 mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia, (P No. 55, I No. 7.1) KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
42	Supplying & fixing of Porcelain fuse channel with cutout on existing wooden / panel using necessary nuts, bolt sand washers. P No. 44 / I No. 6.7.2 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
43	KSRB 13-7.1-4: Providing and fixing in position 50 mm nominal bore gun metal non-return valve horizontal type of approved make including cost of all materials, labour and HOM of equipments with all leads complete as per specifications NO KBS 13.2.16 / 13.13 Page No. 93 Item No.13.55 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
44	Providing NP/CP waste unions conforming to ISI specifications and fixing them in position as per directions including cost of materials, fixtures and conveyance to works pot etc., complete. P.No. 95 / I. No. 13.81.3 PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
45	Supplying and fixing 50 mm dia GI X nipple with ISI mark with all lead and lift load in gun loading and labour charges etc complete	Work done up to the billed quantity and quantity is satisfactory
46	Supplying shunt capaitors conforming to IS 2834, 3 phase 400/440volts grade for power factor improvement of rotating machinery, Capacitor in KVAR rating Nos.2 KVAR capacity with all lead and lift =, loading, unloading and labour charges etc complete as per specifications	Work done up to the billed quantity and quantity is satisfactory
47	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve,indicator ON/OFF, energycross-3 with Short circuit breaking capacity of 10 K and complete wiring as required confirming to IEC 60898.5-32Amps TPNP No. 47 / I No.6.16.5 KPWD SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
48	Fabricating supplying and mounting MS box made out...SWG suitable for floor/wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of redoxide primer paint and finally finishd with approved colour enameled metal paint etc., complete P.No. 49, I.No.6.40.2 KPWD Electrical SR 2014-15	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
49	Supplying and delivery at site brand newstar / Essen / Lotus / Sun-shines / Adarsh / GK Controls best indigenous make combined energy meter-cum-control panel board unit of size 600x450x200 mmminimum mechanically strong vermin and waterproof. The unit shall have two detachable doors suitable for operation on 3ph, 50Hz, 380/440volts, A.C supply with spring loaded latch, locking device with akey ribs should be provided inside the door, canopy apron and louvers ventilators shall be provided. the combined energy meter cum-control panel board unit suitable for operation. The panel board shall be fabricated on single unit in the above components for suitable pumpset. 12.5 HP to 15 HP Star Delta Starter SERDED Rate	Work done up to the billed quantity and quantity is satisfactory
50	Earthwork excavation for pipeline trenches including deporiting or bank upto a lead of 50 mtrs including shiriry and statting danger lighting and using site rails and boming poles at every 100 mtrs wherever necessary as directed in the following structure manhole. Page No.01 / Item No.1.2.2 / PRED SR 2012-13 Hard Soil	Work done up to the billed quantity and quantity is satisfactory
51	Providing and instalation at site of works P.V.C. Pipes including cost of pipes and specials and incluidng lowring into trenches, laying true to line, level and perfect linking at joints, leak proof including jointing encasing the pipe alround to a depth Not less than 15cm with grave or selected earth avalabile from the execavation Etc., Page No.15 item No.3.4.2 b PRED SR 2012-13.	Work done up to the billed quantity and quantity is satisfactory
52	Refilling the basement and pipeline treanches with secleted available earth for trench excavation including authority condition in layers from thdi including disponsary of the surplus earth with a heavy 200mtrs PageNo.3 / Item No.1.6 / PRED SR 2012-13	Work done up to the billed quantity and quantity is satisfactory
53	KSRB 13.6.3-6: Providing and fixing in position brass gate valve with C.I wheel of approved quality (screwed end) 50mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. Specification No. KBS13.2.6/13.3P. 92 / I.13.37 PWD SR - 2016-17	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
54	KSRB 2-2.2: Earthwork excavation for foundation of buildings, culverts water supply, sanitary line and electrical conduits either in pits or in trenches 1.5 m and above in width, in Hard soil not exceeding 1.5m, in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m, after breaking of clods complete as per specifications, specification, No, KBS 2.1(a) / 2.3.5, Page No.5 / Item No.2.3 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
55	KSRB 4-1.3: Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180 kgs with 40 mm and down size graded granite metal coarse aggregates @ 0.85cum and fine aggregares @0.57 cum machine mixed, concrete laid in layers not, exceeding 15 cms, thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications.Specification No.KBS 4.1, 4.2. No.12 / I tem No.4.3 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
56	KSRB 5.2.3: Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6, stone hammerd dressed in courses not less than 20cms high, bond stones at two m.apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 Page No.23 / Item No.5.6 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
57	KSRB 5.3-3: Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5-1.13 Page No.23 / Item No. 5.9 / PWD SR 2015-16	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
58	KSRB 2.3: Filling available excavated earth (excludingrock) insides of foundations upto plinth in layers not exceeding 20cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5m. including cost of all labour complete as per specifications.Specification No.KBS 2.9(P.6/I.2.10) PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
59	KSRB 5-11: Providing and constructing load bearing wall with solid concrete blocks of size 400x200x200 mm having block density not less than 1800kg/m3 and having aminimum average compressive strength 5.00N/mm2 confirming to IS 2185 (Part): 2005 and constructed with CM 1:4, as per IS 2572:2005 including cost of all materials, labour charges, scaffolding, curing complete as per specifications.KBS No.5.4.Page No.25 / I tem No.5.27 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
60	KSRB 4.2.2: Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal, coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum with superplastisiser @ 3lts confirming to IS 9103-1999 reaffirmed-2008 machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation plinth and ground floor level for roofslabs, staircase, lintels, retaining walls, walls (any thickness) including attached plasters, column, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc, including cost of all materials, labour, HOM of machinery, curing, complete as per specifications.Specification No.KBS 4.1,4.6,No.13 / Item No.4.11 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
61	KSRB 4.2.2: Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal, coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum with superplastisiser @ 3lts confirming to IS 9103-1999 reaffirmed-2008 machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation plinth and ground floor level for roofslabs, staircase, lintels, retaining walls, walls (any thickness) including attached plasters, column, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc, including cost of all materials, labour, HOM of machinery, curing, complete as per specifications.Specification No.KBS 4.1,4.6,No.13 / Item No.4.11 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
62	KSRB 4.2.10: Providing and laying in position reinforced cement concrete of mix M20 with OPC cement @ 24kgs, with 12mm and down size graded granite metal coarse aggregates @ 0.5175 cum and fine aggregates @ 0.345 cum with superplastisiser @ 0.225lts, machine mixed, well compacted for plain chajja of 7.5cms.average thickness,upto ground floor lever, including cost of all materials, labour, HOM of machinery, curing, complete as per specification. Specification NO. KBS 4.1,4.6 Page No.14 / Item No.4.19 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
63	KSRB 4.9.1: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to thead joining members wherever necessary complete as per design (laps, hook sand wastage shall not be measured and paid) cost pf materials, labour, HOM of machinery complete as per specifications.Specification No.KBS 4.6.3 Page No.17 / Item No.4.46.2 / PWD SR 2016-17 - FE 500	Work done up to the billed quantity and quantity is satisfactory
64	KSRB 4-6.4: Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached plasters, buttresses, plinth and string courses cost of all materials, labour complete as per specifications. Specification NO KBS 4.6.2 Page No.15 / Item No. 4.31 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
65	KSRB 4-6.10: Providing and removing centering, shuttering, strutting, propping etc., for chajjas, corbels etc., including edges including cost of all materials, labour complete as per specifications.Specification NO KBS 4.6.2 Page No.16 / Item No. 4.37 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
66	KSRB 15.3.13: Providing 12mm thick cement plastering single coat with cement mortar 1:3, to ceiling including rounding off corners where ever required smooth rendering,: Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.Page No.114 / Item No.15.21 / PWDSR-2016-17	Work done up to the billed quantity and quantity is satisfactory
67	KSRB15.3.11: Providing 20mm thick cement plastering single coat with cement mortar 1:4, to stone masonry including rounding off corners where ever required smooth rendering,: Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. Page No.114 / Item No.15.19 / PWD SR 2016-17 (Inside wall)	Work done up to the billed quantity and quantity is satisfactory
68	KSRB15-7: Providing lime rendering for plastering to wall and ceiling, including cost of materials, labour, curing complete as per specifications. (P.115/I.15.33 PWD SR-2016-17).	Work done up to the billed quantity and quantity is satisfactory
69	KSRB15.3.9: Providing 18mm thick cement plastering single coat with cement mortar 1:6, to brick masonry including rounding off corners where ever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications Page No.114 / Item No.15.17 / PWD SR 2016-17 (Out side Wall)	Work done up to the billed quantity and quantity is satisfactory
70	KSRB15-14.1: Providing and applying two coats with oilbound washable distemper of approved brand and shade on wall surface including priming coat with distemper pimer after thoroughly brooming the surface free from mortar drops and other foregin matter including preparing the surface even and sandpaper smooth cost of materials, labours, complete as per specifications PWD SR 2016-17 (P.117 / I. 15.49.1	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
71	KSRB15-16.1: Providing and finishing external walls in two coats with water proof cement paint of approve brand and shade to give an even shade after thourghly brooming the surface to remove all dirt and losse powdered material, free from mortar dops and other foreign matter cost of materials, labours, complete as per specifications PWD SR 2016-17 (P. 118 / I. 15.53.2) with Primer	Work done up to the billed quantity and quantity is satisfactory
72	KSRB15-18.2: Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications. Page No. 121 / Item No. 15.74 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
73	Providing and fixing Special make glazed Vitrified tiles (Granomite finis) of approved make, quality and colour of sized 6000x600x10 mm thick fixed on existing flooring with a special roffe adhesive for flooring and skirting etc., complete including providing spears at required interval and removing stains etc., complete.Page No.107 / Item No.14.43 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory
74	Providing and laying / fixing cement base, precast pre polished cement concrete, designer tiles 25mm thick conforming to IS 1237 heavy duty tiles for flooring reads of steps of steps and landin, laid on a bed of 12mm thick cement mortar 1:3 misfinished with flush pointing using white cement, including cost of materials including cutting, griding the edge ti half/full round where ever requires labour, curing complete as per specification Page No. 109 / Item No. 14.62 / PWD SR 2016-17	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
75	KSRB7.7: Providing and fixing in position in cement concrete 1:3:6 steel glazed windows and ventilators side hung / to phung fully open able as per approved drawings using Zangles of 25x33x3mm, weighing 1.419Kg/m both for outer and inner frames and central mullion section of size 25x46x3mm weighing 2.28Kg/m duly providing T section 19x19x3mm weighing 0.839kg/m for glazing of windows not more than 34cms.ctoc including providing and fixing 4mm thick reeded glass with teak wood beading of required size, all steel section should confirm to I.S.7452:1990 ,4nos, of hold fasts of approved size section should be cut to length welded and electrically grinded sub dividing frames of unit shall betenonned and revette into the frames electrically. All the steel surface shall be thoroughly cleaned free of rustand painted with one coat of anti-corosive paint and finishing with two coats of ready mix paint of approved colour and make including cost of materials, fixtures, labour and HOM of machinery complete as per specification	Work done up to the billed quantity and quantity is satisfactory
76	KSRB :7.5 Providing and fixing pull and push type rolling shutters of approved make out of 18 guage, 75mm wide cold rolled steel lths of convex corrugation, with side guides and bottom rail, with inter locking arrangements for steel laths by means of alternate clips, suspension shaft with High tension coil type springs two numbers, mounted on specially designed pipe shaft, with bracket plates, guide channels, ball bearing arrangements, for inside & outside locking with push & operations complete Including pulling hooks, 4 nos handles with all fittings and accessories, painted with a coat of red lead paint (without top cover) cost of materials, labour, HOM of machinery complete as per specifications. Shutter size 3mx2.8m Specification NO.KBS7.10/7.12 Page No.31 / Item No.7.5 / PWD SR 2015-16	Work done up to the billed quantity and quantity is satisfactory
77	Providing revsrse osmosis system to cover2000 Liters of High TDS water per hour	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
78	Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using 1100V grade, COPPER conductor flexible multi strand FRLS PVC insulated, 2X1.5Sq.mm Cable confirming to the GTP, with a 6 Amps flushtype SP control switch shall be fixed on the existing plastic sheet / gang box, the other end of the wires shall be terminated with sufficient loose length in a wood / PVC round block. complete for each outlet. GROUP A (Page No.05, Item No.2.1 KPWD SR 2014-15 b) Medium point above 3Mtr upto 6Mtr from tapping point to out let via switch	Work done up to the billed quantity and quantity is satisfactory
79	Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using 1100V grade, COPPER conductor flexible multi strand FRLS PVC insulated, 2X1.5Sq.mm Cable confirming to the GTP, with a 6 Amps flushtype SP control switch shall be fixed on the existing plastic sheet / gang box, the other end of the wires shall be terminated with sufficient loose length in a wood / PVC round block. complete for each outlet. GROUP A (Page No.05, Item No.2.1 KPWD SR 2014-15 c) Long point above 6 Mtr upto 10 Mtr from tapping point to out let via switch	Work done up to the billed quantity and quantity is satisfactory
80	Supplying and flush mounting teak wooden box without front plank, made of not less than12mm thick wood, after due groove cutting, Finishing with necessary cement plastering complete (Page No.03, Item No. 1.6) KPWD SR 2014-15 (1.6.5) 4"x4"x3" (101x101x76mm)	Work done up to the billed quantity and quantity is satisfactory
81	Supplying and flush mounting teak wooden box without front plank, made of not less than12mm thick wood, after due groove cutting, Finishing with necessary cement plastering complete (Page No.03, Item No. 1.6) KPWD SR 2014-15 (1.6.1) 12"x12"x3" (300x300x76mm)	Work done up to the billed quantity and quantity is satisfactory
82	Supplying and flush mounting teak wooden box without front plank, made of not less than12mm thick wood, after due groove cutting, Finishing with necessary cement plastering complete (Page No.03, Item No. 1.6) KPWD SR 2014-15 (1.6.3)10"x7"x3" (254x178x76mm)	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
83	Supplying 4mm thick plastic sheet with necessary nitches for fixing switches, regulators etc., and fixing on existing wooden or metal box using N.F.screws. (Page No.17,Item No.3.9) KPWD SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
84	Extra for Groove cutting in brick wall/Ccfloor to the suitable depth for concealing of Conduit/GI pipe and plastering, finishing upto wall surface complete. Upto 50mm conduit in brickwall (Page No. 03, Item No.1.7.1) KPWD SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
85	Supplying heavy gauge PVC Conduit Pipe19/20mm dia 2mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering upto the wall surface and run with 18 SWG GI fish wire run throughout the conduit where ever necessary. (Page No. 02, Item No. 1.3.1) KPWD SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
86	Supplying and fixing PBBC/Bakelite straight or slant batten holder and wiring with 60w/230voltslamps. (Page No.20,Item No.4.2) KPWD SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
87	Supplying patti type fluorescent tube light fitting of 2'-suitable for 14watts fluorescent tube fitting, made out of M.S. Sheet and stove enameled with HF Electronic Ballast, locking type brass contact holders mounted on double fold type sheet base fully wired for use on 230volts AC. Supply including T5 lamp.(Page No.20,Item No.4.5) KPWD SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
88	Wiring for lighting / power circuit using one of FRLS PVC insulated1100 Vgrade, multi strand Copper with low conductor resistance single core wire in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP-A1.5sqmm (Page No.06,Item No.2.5.2) KPWD SR 2014-15	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
89	Supplying and fixing cast Aluminum round or oblong type bulk head fitting with GI wire guard, glass cover with 60/100 watts 230 VGL Slamp.(Page No. 20, Item No. 4.3) KPWD SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
90	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and othe requipment's on the meterboard using 40mm dia 2.90mm thick GI pipe 2.5mtr long buried in a pit... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3.of IS732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122mm dia (Page No.55, Item No.7.1) KPWD SR 2014-15	Work done up to the billed quantity and quantity is satisfactory
91	KSRB 2.14-1: Extra for additional lift of 1.5m. or part thereof for excavation In loose / soft or hard soil including cost of materials, labour complete as per specifications. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
92	Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892cum and fine aggregates @ 465 cum machine mixed, machine mixed,concrete laid in layers not exceeding 15 cms, thick well compacted, in foundation and plinth, including cost of all material, labour HOM Machinery curing complete as per specification, with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
93	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specificaitons. Specification No. KBS 4.6.2 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
94	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth and string courses cost of all materials, labour complete as per specifications. Specification NO KBS 4.6.2 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
95	KSRB 4-6.5 : Providing and removing centering, shuttering, strutting, propping etc., for columns, pillars, post and struts, square / rectangular/ polygon in plan including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
96	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specificaitonsupto 3.50m from ground level. Specification No. KBS 4.6.2 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
97	KSRB 4-6.7 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for sides and soffits of beams, beam haunchings, cantilever girders, bressumers and lintels not exceeding 1m in depth including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

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98	KSRB 4-6.10 : Providing and removing centering, shuttering, strutting, propping etc., for chajjas, corbels etc., including edges including cost of all materials, labour complete as per specifications. Specification NO KBS 4.6.2 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

BOQ Sl No	Description of the Item	Comments/Observation
99	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto SO m. and lift upto 1.S m. including cost of all labour complete as per specifications. specification. No. KBS(with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
100	KSRB 5-11 : Providing and constructing load bearing wall with solid concrete blocks of size 400x200x200 mm having block density not lessthan 1800 kg/m3 and having a minimum average compressive strength 5.00 N/mm2 confirming to IS 2185 (Part) : 2005 and constructed with CM 1:4 , as per IS 2572:2005 including cost of all materials, labour charegs, scaffolding, curing complete as per specifications. KBS No.5.4 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
101	KSRB15-3.10 : Providing 20mm thick cement plaster in single coat with cement mortar 1:6, to stone masonry & concrete surface including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

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102	KSRB 15.3.2 Providing 12mm thick cement plaster in single coat with cement mortar 1:4, to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

BOQ Sl No	Description of the Item	Comments/Observation
103	KSRB 15.3.13 : Providing 12mm thick cement plaster in single coat with cement mortar 1:3, to ceiling including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
104	KSRB 15.10.2 Providing white washing for every one additional coat with lime of approved quality, to give an even shade including cost of materials, labour, complete as per specifications. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
105	KSRB 15.10.4 Providing white washing to ceiling and / or sloping roof surface with additional one coat with lime of approved quality, to give an even shade including cost of materials, labour, complete as per specifications. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

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106	KSRB 15-16.1: providing and finishing external walls in tow coats with water proof cement paint of approve brand and shade to give an even shade after thourghly brooming the surface to remove all dirt and losse powdered material, free from mortar dops and other foreign matter cost of materials, labours, complete as per specifications with Primer with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
107	Providing and applying two coats with Plastic emulsion paint of approved brand wall surface to a give an even approved shade after throuughly brushing the surface,free from mortar drops and other foreign matter, including priming , including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications,with primer.For internal walls. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

BOQ Sl No	Description of the Item	Comments/Observation
108	Providing and applying two coats with Plastic emulsion paint of approved brand wall surface to a give an even approved shade after throuughly brushing the surface,free from mortar drops and other foreign matter, including priming , including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications,with primer. For internal walls. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
109	Providing vitrified tiles 60 x 60cms of approved make, shade and size for flooring laid on a bed of 12mm thick cement mortar 1:3 mix, flush pointing with white cement using colour pigment, including cost of materials, labour, curing complete as per specification. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

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110	KSRB 14-17.2 : Providing skirting, dado, rises of steps with colour glazed tiles on 10mm thick cement plaster 1:3 and jointed with white cement slurry over rough plaster surface (excluding cost of rough plastered surface which should be measured and paid separately) using glazed tiles of approved make and size including cost of materials, labour, complete as per specifications. Specification No.KBS 14.16, 14.17 - Colour glazed tiles 30x60 cms 6mm thick with border of size 30 x 10 cms. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
111	KSRB 9.4-2 : Providing Honne wood frames of doors, windows, clerestory windows, ventilators and other frames, wrought, framed or assembled including making plaster groves (excluding cost of cement concrete and side clamps), but including cost of materials, labour, HOM of machineries complete as per specifications. Specification No. KBS 9.33 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

BOQ Sl No	Description of the Item	Comments/Observation
112	KSRB 9.5-2 : Providing and fixing in position fully panelled Honne wood shutters for doors, styles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and styles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, HOM of machineries complete as per specifications. (excluding cost of fixtures) Specification No. KBS 9.34 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

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113	KSRB 7.9:Providing and fixing .S.gill work for windows and ventilators using M.S.flats, or M.S. square rods, or combination of M.S.flats and square rods as per approved design, drawing including cutting steel sections and welding the same to required pattern with a coat of red lead primer, cost of materials, fixtures, labour and HOM of machinery complete as per specifications. Specification No. KBS 7.12 . with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
114	KSRB 7.10 : Providing and fixing in position aluminium windows and ventilators as per approved drawings with sliding shutters using double track window frame section of size 61.85x31.75mm. with 1.2mm thick, bottom section weight 0.695 kg/m, sides and top sections 1.3 mm. thick weight 0.659 kg/m; and shutter comprising top and bottom section of size 40mmx18mm, 1.25mm thick 0.417 kg./m; shutter outer side 40mmx18mm, 1.25mm.thick weight 0.417 kg/m, shutter interlock section 40mmx26.7mm, 1.1mm thick, weight 0.469 kg/m. the shutters mounted on nylon rollers with approved quality of fixtures such as aluminium handles tower bolts etc.; and providing and fixing 5.5mm. thick plain glass for shutters fitted with rubber beading aluminium sections including cutting to required length, joints mitred subdividing the frame tenonned and rivetted in the assembled frame stiffened with end clips at corners angles etc.	Work done up to the billed quantity and quantity is satisfactory

BOQ Sl No	Description of the Item	Comments/Observation

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115	KSRB 15-17.4 : Applying priming coat over new wood surface and / or wood based surface, after brushing with ready mix enamel priming paint including preparing the surface after thoroughly cleaning oil, grease, dirt and foreign matter, sand papering and knotting ready mix paint including cost of materials, labour, complete as per specifications.with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
116	Providing and applying painting two coats (excluding priming coat) on new wood surface and / or wood based surface with enamel paint to give an even shade, cleaning the surface of all dirt, dust and foreign matter, sand papering including cost of materials, labour, complete as per specifications. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
117	LED Street light.Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminare > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
118	Supplying and Fixing of.....mm dia class A GI pipe bracket up to 2 mtrs long bent at suitable angle and fixing to this bracket 1x40/2x40 watts fluorescent tube street light fitting of all capacities to GI or CI or rail or RCC pole / wall using suitable clamps, bolts, and nuts and wiring using suitable capacity wires. Using 32mm dia G.I.pipe - with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
119	Wiring for lighting/power circuit using one of PVC insulated 1100v grade stranded Aluminium unsheathed wire single core/multi core cable in open or consealed system of wiring. a)4 sqmm. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
120	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A.3.5 core 25 sqmm - with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
121	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.In existing trench/duct.25 sqmm to 75 sqmm - with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
122	Thiristor based single/ Three phase smart street light control and monitoring system Remotely control and and monitorable smart street light system by using web or mobile application .smart control system has hardware ruggedness over field issues like line cross, line short, lighting and any other irregularities in voltage. It has some features like 1.Remote lighting management.2.Precise lighting turnoff.3.Load ballancing.4.Load power regulation.5.Status tracking.	Work done up to the billed quantity and quantity is satisfactory

BOQ Sl No	Description of the Item	Comments/Observation
123	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes25 sqmm Long Barrel - with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
124	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory
125	KSRRB M800-3. Direction and Place Identification Signs upto 0.9 sqm Size Board:-Manufacturing, supply and installation of retro- reflectorised cautionary, mandatory and informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC :67:2012 specifications & fixed over 4 mm thick aluminium composite panel sheet having minimun 0.30 thick aluminium skin on both sides & fixed over a support frame of 25x25x3 mm MS angle and mounted on 75mm dia OR 75x75x6mm Mild steel angle of total height 2.70m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60 cm below ground level.	Work done up to the billed quantity and quantity is satisfactory
126	KSRRB M800-7 Painting: Providing and applying two coats of readly mix paint of approved brand after through cleaning of surface to give an even shade complete as per specifications. P.196 Painting on Steel Surface with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

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127	KSRRB M800-10. Painting new letter and figures of any shade with synthetic enamel paint black or any other approved color to give an even shade complete as per specifications English and Roman Hyphen and the like not to be measured and paid for MORTH Specification No.803 P.197 It No.24.10. with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

BOQ Sl No	Description of the Item	Comments/Observation
128	Manufacturing, Supply & Fixing of Retro- Reflection Road name sign board single Arrow size 1.98X0.9m size made out if wide angle cube corner micro prismatic grade sheeting confirming to IRC 67:2010 & type XI standards of ASTM D 4956-09 specifications and fixed over 2mm thick aluminium sheet back support frame of stainless stell supported by 30NB 1.2mm thick stainless steel pipe all around and 65NB 1.5mm thick pipe vertical post (AISI 202 Grade) firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 30cmx30cmx45cm etc.complete. The information message shal be made out of cut out letters in blue colour transparent overlay film as per IRC 67-2010 Guidelines, 7 years pre-qualification warranty for retro reflective sheeting from the original sheeting manufacturer and a certied copy of three years outdoor exposure report from an independent test lab for the product offered shall be submitted by the contractor. The sign board shall be Retro-Reflective Type XL with all lead and lift , loading and unloading and allother incidental charges etc., complete as per specification and direction of the engineer-in-charge of the work	Work done up to the billed quantity and quantity is satisfactory

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MODIFIED SCHEDULE – B Extra Items

BOQ Sl No	Description of the Item	Comments/Observation
E1	Workstation table finishing venner inside laminated border Silver, top granite with key board tray etc complete cost inclusive of materials, labours, transportation all taxes etc complete	Work done up to the billed quantity and quantity is satisfactory
E2	Pedal Unit 3 Drawers	Work done up to the billed quantity and quantity is satisfactory
E3	Providing and fixing storage unit of 0.75m width made out of 19mm thick commercial ply vertical support finished in approved 1.5mm laminate with 12mm thick ply packing internally finished with enamel paint of approved colour and shade shelves shall be formed out of 19mm ply finished with enamel paint of approved shade and colour and 19mm thick shutters formed out of 19mm thick ply finished with 1.5mm thick laminate of approved shade and colour etc., complete the rate includes cost of all materials, labour charges, complete as per specification.(P.No. 324, I.No. 39.4 of SR 2018-19)	Work done up to the billed quantity and quantity is satisfactory
E4	Steel Executive revalving chair with cane ear back etc cost inclusive of materials, labours, transportation all taxes etc complete (DSMS Approved Rate)	Work done up to the billed quantity and quantity is satisfactory
E5	Visitor chair with cushion seat back with MS round pipe etc complete cost inclusive of materials, labours, transportation all taxes etc complete (DSMS Approved rates)	Work done up to the billed quantity and quantity is satisfactory
E6	Concealed Conduit System Supplying heavy gauge PVC conduit pipe .....mm dia .....mm thick confirming to IS 2509 with suitable size bends, metal/PVC junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclosures, run with 18SWG GI fish wire wherever necessary19/20mm dia 2mm thick	Work done up to the billed quantity and quantity is satisfactory
E7	25mm dia 2mm thick	Work done up to the billed quantity and quantity is satisfactory
E8	Supplying heavy gauge PVC Conduit Pipe ....dia .....mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering up to the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary.19/20mm dia 2mm thick	Work done up to the billed quantity and quantity is satisfactory
E9	25mm dia 2mm thick	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
E10	Supplying And Fixing Metal Fan Box with Round Hook.	Work done up to the billed quantity and quantity is satisfactory
E11	Supplying and flush mounting powder coated / galvanized metal box suitable for mounting modular switch plates. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall1-3Way	Work done up to the billed quantity and quantity is satisfactory
E12	4-5Way	Work done up to the billed quantity and quantity is satisfactory
E13	6Way	Work done up to the billed quantity and quantity is satisfactory
E14	Point wiring using Copper wire without switch. Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using 1100V grade, COPPER conductor flexible multistrand FRLS PVC insulated, 2X1.5Sq.mm Cable confirming to the GTP without switch, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block complete for each outlet.GROUP BShort point upto 3Mtr from tapping point to out let via switch box	Work done up to the billed quantity and quantity is satisfactory
E15	Medium point above 3Mtr upto 6Mtr from tapping point to out let via switch box	Work done up to the billed quantity and quantity is satisfactory
E16	Long point above 6Mtr upto 10Mtr from tapping point to out let via switch box	Work done up to the billed quantity and quantity is satisfactory
E17	Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box.1 to 3 Module	Work done up to the billed quantity and quantity is satisfactory
E18	4 Module	Work done up to the billed quantity and quantity is satisfactory
E19	6 Module	Work done up to the billed quantity and quantity is satisfactory
E20	Supplying and fixing of modular switch/ Socket/stepped electronic fan regulator/ dimmer/telephone socket etc on existing modular switch plate as per IS 3854 and IS 1293 GROUP B 6Amps one way.	Work done up to the billed quantity and quantity is satisfactory
E21	6Amps 3way socket.	Work done up to the billed quantity and quantity is satisfactory
E22	Stepped Fan Regulator.	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
E23	16Amps one way switch	Work done up to the billed quantity and quantity is satisfactory
E24	6/16Amps universal socket	Work done up to the billed quantity and quantity is satisfactory
E25	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand Copper conductor single core wire in open or concealed system of wiring as per IS-694:1990 & confirming to GTP of GROUP -B.1.5 sqmm	Work done up to the billed quantity and quantity is satisfactory
E26	2.5 sqmm	Work done up to the billed quantity and quantity is satisfactory
E27	4 sqmm	Work done up to the billed quantity and quantity is satisfactory
E28	LED Indoor Supplying of 4' feet - LED PVC Square Batten ..W with high quality diffuser with Life of 25000 burning hours & 70% lumen maintenance with CRI > 80. Power Input: 220-240V @ 50Hz & Power factor >0.9 along with CE approved drivers. 5 years Warranty against any manufacturing defect working under standard electrical condition LED light fighting 4' - 28 watts	Work done up to the billed quantity and quantity is satisfactory
E29	Supplying exhaust fan of 1440 RPM of 300mm (12") size with bracket blades complete for light duty suitable to operate on 230V 50Hz, AC Supply.	Work done up to the billed quantity and quantity is satisfactory
E30	Supplying capacitor type ceiling fan complete with down rod blades, shackle, canopies etc., for operation on 230 volts, 50 cycles. Single phase AC supply conforming to ISS-374-1979 and with double ball bearing system. 48" Sweep (1200mm)Regular model	Work done up to the billed quantity and quantity is satisfactory
E31	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of red oxide primer paint and finally finished with approved colour enameled metal paint etc., complete.16SWG	Work done up to the billed quantity and quantity is satisfactory
E32	Supplying and fixing regular MCB distribution boards on wall / wood board / flush mounting using required clamps, bolts, nuts etc., with provision for fixing suitable type capacity MCB's single phase / 3 phase / single door with powder coated painting. Made out of 14 SWG MS enclosure.II - Double Door4Way SP &N	Work done up to the billed quantity and quantity is satisfactory
E33	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898.5-32Amps SP	Work done up to the billed quantity and quantity is satisfactory

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BOQ Sl No	Description of the Item	Comments/Observation
E34	5-32 Amps DP	Work done up to the billed quantity and quantity is satisfactory
E35	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers.32Amps	Work done up to the billed quantity and quantity is satisfactory
E36	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A.3.5 core 25 sqmm	Work done up to the billed quantity and quantity is satisfactory
E37	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.In existing trench/duct.25 sqmm to 75 sqmm	Work done up to the billed quantity and quantity is satisfactory
E38	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia	Work done up to the billed quantity and quantity is satisfactory
E39	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7)In soil (ordinary)	Work done up to the billed quantity and quantity is satisfactory
E40	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV.40mm	Work done up to the billed quantity and quantity is satisfactory
E41	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc.25Sqmm	Work done up to the billed quantity and quantity is satisfactory
E42	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.	Work done up to the billed quantity and quantity is satisfactory
E43	Fixing all types and all capacities of fluorescent / false ceiling / spot light / CFL / LED fittings indoor on the wall / ceiling / rafters / girders using 23/0.0076" twin twisted PVC insulated wires, required Nos of round blocks and clamps.On wall / ceiling / Rafter / Girders	Work done up to the billed quantity and quantity is satisfactory
E44	Fixing a ceiling / Wall mounting fan of all capacities and all types to the existing 'S' hook with fan regulator to the existing board together with supplying and fixing 5 amps. ceiling rose, necessary length of 23 / 0.0076 inch PVC insulated twin twisted copper wire and wiring.	Work done up to the billed quantity and quantity is satisfactory

BOQ Sl No	Description of the Item	Comments/Observation
E45	Fixing one exhaust fan in the nitch already left in the wall with bolts and nuts and 5 amps. ceiling rose with sufficient length of 23 / 0.0076 inch PVC insulated twin core wire.	Work done up to the billed quantity and quantity is satisfactory
E46	Supplying, erecting, testing & commissioning of OFF-LINE UPS system suitable for operation on 230V, 50Hz, A/C supply, with all accessories complete and Excluding batteries and wiring complete. 5 KVA OFF LINE UPS Two Hour back up Excluding 6x 120Ah batteries	Work done up to the billed quantity and quantity is satisfactory
E47	Supplying, installation, testing & commissioning of 12V DC, AH batteries in poly propylene container for U.P.S. Low maintenance Tubular batteries.12 V ,12 V ,150 AH capacity. Acid Battery.	Work done up to the billed quantity and quantity is satisfactory
E48	LED Street light.Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminare > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacture. Suitable for B1/B2 Roads as per IS 1944 Part I & Part II.LED Streetlight 65watts	Work done up to the billed quantity and quantity is satisfactory

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